

Drug Poisoning / Prescription Drug Overdose

Any drug has the potential to be misused or abused, and may be even more dangerous when used in combination with other drugs or alcohol. The most common drugs involved in prescription drug overdose deaths include Hydrocodone (e.g., Vicodin), Oxycodone (e.g., OxyContin), Oxymorphone (e.g., Opana), and Methadone (especially when prescribed for pain). Changes in how providers prescribe these powerful drugs created, and continue to fuel, the epidemic. The amount of opioids prescribed and sold in the U.S. quadrupled from 1999 through 2011. Taking too many prescription painkillers may cause a person to stop breathing, leading to death.¹ While the public health burden of the prescription drug epidemic remains substantial, 2012 saw the first national drop in prescription overdose deaths since the 1990s, and appears to have leveled off. This drop in deaths parallels a similar drop in painkiller prescribing rates across the country.²

Heroin overdose death rates have been climbing sharply since 2010. Evidence to date suggests that widespread prescription opioid exposure and increasing rates of opioid addiction have played a role in the growth of heroin use. Heroin is an opioid and acts on the same receptors in the brain as opioid pain relievers. Approximately three out of four new heroin users report having abused prescription opioids prior to using heroin.³

Risk factors for painkiller abuse and overdose include:

- Obtaining overlapping prescriptions from multiple providers and pharmacies.^{4,5,6,7}
- Taking high daily dosages of prescription painkillers^{5,8,9,10}
- Having mental illness or a history of alcohol or other substance abuse.¹¹
- Living in rural areas and having low income.
- Inappropriate provider prescribing practices and patient use are substantially higher among Medicaid patients than among privately insured patients.¹²
- In one study based on 2010 data, 40% of Medicaid enrollees with painkiller prescriptions had at least one indicator of potentially inappropriate use or prescribing, including overlapping painkiller prescriptions, overlapping painkiller and benzodiazepine prescriptions, and long-acting or extended release prescription painkillers for acute pain and high daily doses.¹²

How does drug poisoning affect the United States?

Fatal data

- In the U.S., 44 people die each day from overdose of prescription painkillers.¹³
- From 2009-2013, unintentional poisoning was the number one leading cause of injury death in the U.S. for adults, aged 25 to 64, and the third leading cause of youth and young adults aged 15 to 24.¹⁴
- Deaths from prescription painkillers have quadrupled since 1999, killing more than 16,000 people in 2013.¹⁵
- In 2013, there were 43,982 drug poisoning deaths in the U.S. and of those, 51.8% (22,767) were related to prescription drugs and to heroin overdose.^{13,14}
- In 2013, there were 22,767 prescription drug overdose-related deaths. Seventy-one percent (16,235 deaths) of prescription drug overdose-related deaths involved opioid analgesics (opioid pain relievers or prescription painkillers), and 30.6% involved benzodiazepines. People who died from drug overdose may have combinations of benzodiazepines and opioids in their bodies, resulting in some deaths having more than one drug classification.¹³
- Men are more likely to die from prescription opioid overdose, but the gap between men and women is closing. Deaths among women due to prescription painkiller overdose increased more than 400% during 1999-2010, compared to 237% among men.¹⁵

Non-fatal data

- In 2011, there were 2.5 million emergency department (ED) visits attributed to drug misuse or abuse, and of those visits, more than 1.4 million involved pharmaceuticals.¹⁶
- The number of ED visits involving misuse or abuse of pharmaceuticals has steadily increased from 2004 (626,470 visits) through 2011 (1,428,145 visits). The most common drugs involved were anti-anxiety and insomnia medications and narcotic pain relievers.¹⁶

- From 2004 to 2011, the rate of ED visits involving misuse or abuse of pharmaceuticals has increased by 114%. The rate of ED visits involving central nervous system stimulants increased by 292%, and anti-anxiety and insomnia medication visits increased by 124%.¹⁶

Cost data

- Fatal unintentional poisoning costs were about \$68 million in 2010. Of this amount, the combined cost of work loss and medical costs was an average of \$653,429 per fatality.¹⁴
- In the U.S., prescription opioid abuse costs were about \$55.7 billion in 2007. Of this amount, 46% was attributable to lost productivity, 45% to healthcare costs (e.g., abuse treatment), and 9% to criminal justice costs.¹⁷

How does drug poisoning affect Indiana?

- Poisoning is the leading cause of injury deaths in Indiana, and drugs cause 9 out of 10 poisoning deaths. Drug poisoning (overdose) deaths increased five-fold since 1999, surpassing motor vehicle traffic-related deaths in 2008.
- In 2013, the drug overdose death rate was 16.3 deaths per 100,000 persons, compared to a motor vehicle traffic-related death rate of 11.7 deaths per 100,000 persons.¹
- In 2013, there were 1,049 drug poisoning deaths in Indiana, compared to 184 in 1999. Heroin overdose deaths increased from less than 5 in 1999 to 152 in 2013. Deaths due to benzodiazepine overdose increased from 7 in 1999 to 74 in 2013.¹⁸
- In 2013, there were 16.5 drug poisoning deaths per 100,000 in Indiana, a rate slightly higher than the national rate of 13.7 and the Midwest rate of 14.6. Indiana ranks 16th for drug overdose deaths.¹⁴
- Males had rates 1.5 times higher than females and persons aged 35-39 years had the highest rate of all age categories (32.7 per 100,000).¹⁴
- The 2011 Youth Risk Behavior Survey found over 21% of Indiana 9th-12th graders have taken a controlled prescription drugs for non-medical reasons.
- In 2013, there were 11,066 non-fatal drug poisoning-related emergency department visits, of which 2,157 visits were due to opioid overdose.¹⁸
- In January 2015, the prescription drug abuse epidemic in Indiana gained national prominence for its link to an epidemic of acute HIV infection in a rural city resulting from sharing syringes while injecting oral oxycodone (OPANA®). As of June 2015, 169 people have been diagnosed with HIV; approximately 88% of those are co-infected with hepatitis C. The affected county ranks second in the state for average age-adjusted prescription drug overdose mortality rates (33.48 for years 2002-2013).¹⁸

How do we address this problem?

Collaborations:

- The **Indiana Attorney General's Prescription Drug Abuse Task Force** (Task Force) works to significantly reduce the abuse of controlled prescription drugs and to decrease the number of deaths associated with these drugs in Indiana. The Task Force employs a multi-modal, multi-disciplinary approach through five Committees: (1) Education; (2) Enforcement; (3) INSPECT (4) Take Back; and (5) Treatment & Recovery. Website: <http://www.in.gov/bitterpill/>
- The multi-branch **statewide Commission on Improving the Status of Children in Indiana**, in cooperation with other entities, studies issues concerning vulnerable youth and makes recommendations concerning pending legislation, review, and promotes information sharing and best practices. As part of the Commission, the **Substance Abuse and Child Safety Task Force's** mission is to "Explore best practices and evidenced-based research to create positive, lasting outcomes for children who abuse drugs, live in households where drug abuse exists, or who are in need of mental health treatment. To that end, our aim is to craft effective ways to address gaps in mental health and substance abuse services between urban and rural communities, the lack of long-term solutions for children with mental health and substance abuse problems in and out of the juvenile justice system, and financial barriers to receiving mental health and substance abuse treatment regardless of where families live." Website: <https://secure.in.gov/children/index.htm>

- The **Indiana Statewide Trauma System Injury Prevention Plan** includes opportunities for collaborative poisoning and drug overdose prevention efforts.
- ISDH Division of Mental Health and Addiction **Substance Abuse Prevention and the Mental Health Promotion Strategic Plan 2012-2017**. Website: <http://www.in.gov/fssa/dmha/4484.htm>

Data collection:

- INSPECT, Indiana’s prescription drug monitoring program, was designed to serve as a tool to address the problem of prescription drug abuse and diversion in Indiana. By compiling controlled substance information into an online database, INSPECT performs two critical functions:
 - Maintain a warehouse of patient information for health care professionals.
 - Provide an important investigative tool for law enforcement.
 Indiana was the first state in the nation to share data with all neighboring states and continues to share live data with other states. Website: <http://www.in.gov/pla/inspect/>
- Naloxone use by Emergency Medical Service (EMS) providers is captured in the pre-hospital component of the **Indiana Trauma Registry**. Additionally, with legislation passed in 2015, the ISDH will capture data on naloxone use by lay persons.
- The **Indiana State Department of Health Division of Trauma and Injury Prevention** conducts statewide injury surveillance of overdose deaths through death certificates, hospitalizations, and ED visits.

Policy:

- The 2013 legislative session ensured the sustainability of INSPECT by dedicating 100% of the Indiana Controlled Substance Registration (CSR) fees paid by prescribers to support ongoing use and maintenance of INSPECT, required owners of pain management clinics to maintain a CSR, and required the Medical Licensing Board (MLB) to adopt rules for prescribing opioids for chronic pain. The Task Force assisted with rule promulgation and published a complementary prescriber toolkit.
- The Task Force highlighted inconsistent reporting of Neonatal Abstinence Syndrome (NAS) during the 2014 legislative session. A NAS Committee of the Indiana Perinatal Quality Improvement Collaborative (IPQIC) Network developed screening and reporting protocols to assess the NAS burden, now implemented in a pilot program. Additional legislation passed reduces the reporting interval to INSPECT from seven days to 24 hours, effective January 2016 and permits first responder use of naloxone.
- Senate Enrolled Act 406 during the 2015 legislative session, commonly referred to as the “Naloxone Bill”, allows for broader distribution of naloxone, a prescription drug that reverses the effects of an opioid overdose. Prescribers can prescribe directly to someone at-risk or to their family/friends or by standing order. The prescriber has to provide instructions on how to use the drug, ensure that emergency authorities are called if the drug is used, and provide information on drug addiction treatment information (including Vivitrol). When the authorities are called, they must register the dispensing of naloxone with the Indiana Trauma Registry. The ISDH must work with the Indiana Department of Homeland Security on this reporting requirement.

Education:

- **“First Do No Harm: The Indiana Healthcare Providers Guide to the Safe, Effective Management of Chronic Non-Terminal Pain”** developed by the Indiana Prescription Drug Abuse Prevention Task Force’s Education Committee. This provider toolkit, based on expert opinion and recognized standards of care, was developed over many months with the input of healthcare providers representing multiple specialties and all corners of the state. First Do No Harm provides options for the safe and responsible treatment of chronic pain, including prescriptions for opioids when indicated, with the ultimate goals of patient safety and functional improvement. It was developed as an interactive compendium to the new Medical Licensing Board rule addressing Opioid Prescribing for Chronic, Non-terminal Pain. Website: http://www.in.gov/bitterpill/files/First_Do_No_Harm_V_1_0.pdf

- **CDC education recommendations:**
 - Talk with your doctor about:
 - The risks of prescription painkillers and other ways to manage your pain.
 - Making a plan on when and how to stop, if a choice is made to use prescription painkillers.
 - Use prescription painkillers only as instructed by your doctor.
 - Store prescription painkillers in a safe place and out of reach of others.
 - Help prevent misuse and abuse by not selling or sharing prescription painkillers. Never use another person's prescription painkillers. Website: <http://www.cdc.gov/drugoverdose/epidemic/public.html>
- **CDC Policy Impact: Prescription Painkiller Overdoses** presents evidence-based policy approaches to help reverse the prescription painkiller overdose epidemic: <http://www.cdc.gov/homeandrecreationalafety/pdf/policyimpact-prescriptionpainkillerod.pdf>
- The CDC Injury Center released several Vital Signs packages:
 1. **Prescription Painkiller Overdoses in the U.S.:** <http://www.cdc.gov/vitalsigns/PainkillerOverdoses/index.html>
 2. **Use and Abuse of Methadone as a Painkiller:** <http://www.cdc.gov/vitalsigns/MethadoneOverdoses/index.html>
 3. **Prescription Painkiller Overdoses - A Growing Epidemic, Especially Among Women:** <http://www.cdc.gov/vitalsigns/PrescriptionPainkillerOverdoses/index.html>
 4. **Opioid Painkiller Prescribing - Where You Live Makes a Difference:** <http://www.cdc.gov/vitalsigns/opioid-prescribing/>
 5. **Today's Heroin Epidemic:** <http://www.cdc.gov/vitalsigns/heroin/index.html>

Interventions:

- CDC recommends patients who are prescribed opioid pain relievers be counseled against sharing medications, about proper medication storage, use, and disposal, and compliance with prescribing physician's instructions.¹⁹
- **Disposal of unused** medications through **proper disposal** and **Drug Take-Back Events** ensures unwanted or unneeded medications do not end up on the street or damage the environment.
- Get help for **Substance Abuse Problems** via SAMHSA's National Helpline: 1-800-662-HELP or through SAMHSA's **Behavioral Health Treatment Services Locator:** <https://findtreatment.samhsa.gov/>.
- If a poisoning occurs, remain calm, and:
 - Call 911 if you have a poison emergency and the victim has collapsed or is not breathing.
 - Call the Indiana Poison Center Helpline: 1-800-222-1222 if the victim is awake and alert. Try to have this information ready: 1) the victim's age and weight, 2) the container or bottle of the poison if available, and 3) the time and address of the poison exposure

Measures: Healthy People 2020:

Injury and Violence Prevention (IVP)-9: Prevent an increase in poisoning deaths

IVP-9.1: Prevent an increase in poisoning deaths among all persons

IVP-9.2: Prevent an increase in poisoning deaths among persons aged 35 to 54 years

IVP-9.3: Prevent an increase in poisoning deaths caused by unintentional or undetermined intent among all persons

IVP-9.4: Prevent an increase in poisoning deaths caused by unintentional or undetermined intent among persons aged 35 to 54 years

IVP-10: Prevent an increase in non-fatal poisonings

SA-12: Reduce drug-induced deaths

SA-19: Reduce the past-year nonmedical use of prescription drugs

SA-19.1: Reduce the past-year nonmedical use of pain relievers

SA-19.2: Reduce the past-year nonmedical use of tranquilizers

SA-19.3: Reduce the past-year nonmedical use of stimulants

SA-19.4: Reduce the past-year nonmedical use of sedatives

SA-19.5: Reduce the past-year nonmedical use of any psychotherapeutic drug (including pain relievers, tranquilizers, stimulants, and sedatives)

Additional resources:

- a. ISDH Division of Trauma and Injury Prevention: <http://www.in.gov/isdh/19537.htm> and <http://www.in.gov/isdh/26689.htm>
- b. DMHA Bureau of Mental Health Promotion and Addiction Prevention: <http://www.in.gov/fssa/dmha/index.htm>
- c. Indiana Attorney General Prescription Drug Abuse Prevention Task Force: <http://www.in.gov/bitterpill/>
- d. Indiana Poison Center Helpline: 1-800-222-1222 <http://indianapoison.org/>
- e. INSPECT (Indiana's Prescription Drug Monitoring Program): <http://www.in.gov/pla/inspect/>
- f. Indiana State Epidemiology and Outcomes Work Group: EPI Profile: <http://www.healthpolicy.iupui.edu/projectDetail.aspx?ProjectID=4395>
- g. National Safety Council: <http://www.nsc.org/pages/home.aspx>
- h. Substance Abuse and Mental Health Services Administration (SAMHSA): www.samhsa.gov
- i. U.S. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control: <http://www.cdc.gov/homeandrecreationalafety/poisoning/index.html>
- j. U.S. Centers for Disease Control and Prevention, Prevent Unintentional Poisoning: <http://www.cdc.gov/features/poisonprevention/>
- k. U.S. Drug Enforcement Administration: <http://www.dea.gov/index.shtml>
- l. U.S. Food and Drug Administration Disposal of Unused Medicines: <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm101653.htm>

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